



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09 904,224	07 12/2001	Sukun Zhang	CHR 00-63	9688

7590 04 18 2003

Daniel B. Reece IV  
Westvaco Corporation  
5255 Virginia Avenue  
Post Office Box 118005  
Charleston, SC 29423-8005

EXAMINER

ASINOVSKY, OLGA

ART UNIT	PAPER NUMBER
----------	--------------

1711

4

DATE MAILED: 04/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/904,224

Applicant(s)

Zhang et al

Examiner

Olga Asinovsky

Art Unit

1711



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Feb 19, 2003
- 2a) This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 1-18 is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) \_\_\_\_\_ accepted or b) \_\_\_\_\_ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) \_\_\_\_\_ approved b) \_\_\_\_\_ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some\* c) None of:
- Certified copies of the priority documents have been received.
  - Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \*See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachments

- 1) ☒ Notice of Draftsperson's Patent Drawing Review (PTO 943)
- 2) ☐ Notice of Informal Patent Application (PTO 152)
- 3) ☒ Information Disclosure Statement (PTO 1449, Paper No. 2&3)
- 4) ☐ Other \_\_\_\_\_

Art Unit: 1711

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan et al U.S. Patent 4,894,397 in view of Mylonakis et al U.S. Patent 4,371,669.

The present invention is an aqueous polymer composition produced by reacting in an emulsion polymerization of (a) a water-dispersible polymer having an average molecular weight in the range of about 2,000 to about 12,000, (b) a fatty acid, (c) vinyl monomer(s), (f) a polymerizable initiator, and (g) water, wherein the components are present in the specified amount in claim 1, and an aqueous polymer composition can include (d) a chain transfer agent and (e) a surfactant, there is no low limitation of the components (d) and (e).

Art Unit: 1711

of the resulting first and/or second stage polymers, free radical initiator and cross-linking agent, column 4, lines 20-36. Styrene and acrylic acid polymer can be produced in the first stage, column 6, lines 1-9. Styrene and acrylic acid polymer having a number average molecular weight from about 3,000 to 10,000, column 6, line 34, is readable as component (a) in applicants' claim 1. The monomers and their relative ratios are selected so that the resulting polymer will not be water soluble upon pH adjustment, column 4, lines 44-47 and column 7, lines 53-54. Therefore, the polymer produced in the first stage is a water-dispersible polymer. The second stage emulsion polymer is formed from vinyl group containing monomers, column 8, lines 32-53, which are readable in applicants' component (b) in the present claim 1. An initiator, a chain transfer agent and an anionic surfactant are readable in the present claim 1, column 8, lines 61-68 and column 7, lines 42-43. The composition can be used for producing films, polishes, varnishes, paints, inks and adhesives, column 10, lines 8-11, for the present claims 13-18.

The difference between the present claims and Morgan is the requirement in the present claims of a fatty acid. Morgan does not disclose a fatty acid. However, Morgan discloses a nonvolatile wax such as polyethylene waxes for the formulation a high gloss floor polish composition, column 13, line 25, wherein a water resistance property would be expected.

Mylonakis discloses a carboxyl functional copolymer prepared by an emulsion

Art Unit: 1711

column 3, lines 46-47, column 4, line 45. The composition can include tall oil fatty acids, column 7, line 65.

It would have been obvious to one of ordinary skill in the art to modify the composition in Morgan by replacing a polyethylene wax with a tall oil fatty acid in Mylonakis' invention because of their similar property as to improve water resistance. The motivation is that it is within the skill of one in the art to use a tall-oil fatty acid in Mylonakis for the composition in Morgan's invention because of the ability to improve the resistance of the film to attack by water. Mylonakis column 7, line 54. Therefore, a polyethylene wax and a tall-oil fatty acid would perform equally well within the same expectation.

### ***Claim Rejections - 35 USC § 112***

2. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 recites the limitation "the water-dispersible polymer is a member selected from the group consisting of acrylic acid, methacrylic acid, fumaric acid, maleic anhydride, and combination thereof". All recited monomers produce water-soluble polymer(s). Therefore, a

Art Unit: 1711

at page 13 a water-dispersible polymer is a styrene acrylic resin. Example 2 at page 14 discloses an alkali-soluble polymer. The definition for "water-dispersible polymer" is given at page 9, lines 19-21.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art is relevant to show the state of the art knowledge.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Asinovsky whose telephone number is (703) 308-0041. The examiner can normally be reached on Monday to Friday from 9am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck, can be reached on (703) 308-2462. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310 and (703) 872-9311 after final.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

O.A.

April 12, 2003

JOE  
SUPERVISOR  
Tel: (703) 308-2462